

Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-22. (Canceled)

23. (New) A method comprising:

extending a mobile operator's push-to-talk (PTT) system to enable registered users on the PTT system to establish PTT sessions with unregistered end-user equipment, where such unregistered end-user equipment is not registered for PTT service with any mobile operator's PTT system but can be located on a public data network by querying a directory service database accessible on a public data network, the database containing a PTT address for the unregistered end-user equipment, the method including:

a wireless phone, having PTT functionality and registered with the mobile operator's PTT system, sending a request for a PTT session to the system's PTT server, the request including a unique identifier of the unregistered end-user equipment wherein the equipment comprises a destination network computer accessible on a public data network and having PTT functionality;

the PTT server receiving the request and sending a query to the directory service database for the PTT address of the unregistered end-user equipment;

the directory service database receiving and resolving the query, based on the unique identifier, to the PTT address of the unregistered end-user equipment; and

the PTT server receiving the PTT address and sending a request to initiate a PTT session with the destination network computer.

24. (New) The method of claim 23, wherein the public data network is the Internet.

25. (New) The method of claim 23, wherein the PTT address is a Session Initiation Protocol (SIP) address.
26. (New) The method of claim 25, wherein the SIP address is a SIP-URI that can be further resolved into an IP address and a port number for receiving PTT sessions at the destination network computer.
27. (New) The method of claim 23, wherein the directory service issues the unique identifier to the destination network computer.
28. (New) The method of claim 27, wherein the unique identifier is a telephone number with a # prefix.
29. (New) The method of claim 23, wherein the unique identifier is a fixed or variable length number or name with a # or * prefix.
30. (New) An apparatus comprising:
a push-to-talk (PTT) server of a mobile operator's PTT system including means for extending the PTT system to enable a registered user of the PTT system to initiate a PTT session with unregistered end-user equipment which is not registered for PTT service with any mobile operator's PTT system, the unregistered end-user equipment comprising a destination network computer having PTT functionality and being accessible on a public data network;
the PTT server containing means for querying an external directory service database, accessible on a public data network, with a unique identifier to obtain a PTT address for the unregistered end-user equipment, and
means for initiating a PTT session with the unregistered end-user equipment.
31. (New) The apparatus of claim 30, wherein the means for querying includes means for querying a DNS directory service.

32. (New) The apparatus of claim 30, wherein the means for querying includes means for receiving the PTT address.

33. (New) The apparatus of claim 30, wherein the means for initiating includes means for sending a PTT session request to the destination network computer.

34. (New) The apparatus of claim 33, including means for receiving a PTT session response from the destination network computer.

35. (New) The apparatus of claim 33, including means for accessing a user equipment registered with the PTT server, means for receiving a request for a PTT session with the unique identifier, and means for sending the user equipment a session response.

36. (New) An apparatus comprising:
a directory service,
residing on a computer,
accessible on a public data network, and
containing a unique identifier and an associated push-to-talk (PTT) address of an
unregistered end-user equipment comprising a destination network computer having
PTT functionality and accessible on a public data network and not registered for PTT
service with any mobile operator's PTT system,
wherein the directory service extends a mobile operator's PTT system to enable
a registered user of the PTT system to initiate a PTT session with the unregistered end-
user equipment,
the directory service comprising a database external to the PTT system and
including:
means for receiving a request including a unique identifier from a PTT server of
the PTT system,

means for resolving the request to identify the unregistered end-user equipment associated with the unique identifier, and
means for returning the PTT address to the PTT server.

37. (New) The apparatus of claim 36, wherein the public data network is the Internet.

38. (New) The apparatus of claim 36, wherein the destination address is a Session Initiation Protocol (SIP) address.

39. (New) The apparatus of claim 38, wherein the SIP address is a SIP-URI that can be resolved into an IP address and a port number for receiving PTT sessions at the network computer.

40. (New) The apparatus of claim 36, wherein the unique identifier is a number or name.

41. (New) The apparatus of claim 36, wherein the directory service is a domain name system (DNS) directory service.

42. (New) The apparatus of claim 36, wherein the directory service stores the PTT address as a resource record.

43. (New) The apparatus of claim 42, wherein the format of the resource record is one or more of a Naming Authority Pointer (NAPTR), Service (SRV), and A record.